

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have cancelled claims 2, 3, 7, 9, 10 and 13 without prejudice and have amended claims 1 and 8. Claims 1 and 8 have been amended to substantially incorporate the limitations of original claims 3 and 9, respectively. In addition, new claim 14 has been added. No new matter has been added.

Applicant notes with appreciation the indication of allowable subject matter being recited by claims 4-6, 11 and 12.

For the reasons set forth below, Applicant respectfully submits that the pending claims are in condition for allowance.

II. The Rejection Of Claims Under 35 U.S.C. § 102

Claims 1-3, 7-10 and 13 were rejected under 35 U.S.C. § 102(e) as being anticipated by Brunolli (USP No. 6,731,135). Applicants respectfully submit that the pending independent claims, which are claims 1 and 8, are patentable over Brunolli for at least the following reasons.

First, with regard to claim 1, which has been amended to incorporate the subject matter of original claim 3, the current compensation circuit of the present invention operates to increase the amount of current supplied by the current driver when the current source transistor contained in the current driver enters a non-saturated state of operation. Specifically, the current compensation operates to increase the output current by substantially the same amount as the reduction in output current caused by the current source transistor entering the non-saturated state of operation.

In contrast, Brunolli discloses a device for providing a mid-point biasing scheme. More specifically, in the device disclosed in Brunolli, the current source (i.e., transistor QB) of

Brunolli changes the output current by controlling the gate potential of transistor QB. As a result of this configuration, if the current source enters the non-saturated region, where the voltage V_{ds} is not ensured because of a rise in common mode potential, the current shortage cannot be completely compensated for in the device of Brunolli even if the gate potential of the current source (QB) is changed. Thus, at a minimum, Brunolli fails to disclose or suggest a *current compensation circuit which increases the output current by an amount substantially equal to the amount of reduction in the output current caused by the current source transistor entering a non-saturated region.*

Turning to claim 8, as amended, claim 8 recites that the plurality of switch circuits, which are coupled in a parallel configuration, are activated on an individual basis, meaning the switches can be individually controlled so as to be ON or OFF regardless of the state of the other switches. In accordance with the present invention, the decision regarding how many of the plurality of switch circuits to activate is made automatically in response to a variation in a common mode potential. As a result of this configuration, the present invention allows for a reduction in switching noise and the current source is more likely to be maintained in a saturated region.

In contrast, in Brunolli, transistors Q1-Q4 function as a single switch, and therefore cannot be operated individually from one another. Indeed, as expressly stated in Brunolli, transistors Q1 and Q4 are always ON together, and when these transistors are ON, transistors Q2 and Q3 are OFF. Similarly, transistors Q2 and Q3 are always ON together, and when these transistors are ON, transistors Q1 and Q4 are OFF (*see*, col. 1, lines 58-61). As such, it is clear that transistors Q1-Q4 are not individually or separately controllable. Thus, at a minimum, Brunolli fails to disclose or suggest a current driver circuit having a plurality of switches *wherein a current compensation circuit operates activate the plurality of switch circuits on an individual*

basis as a difference between a power source potential level and the common mode potential is reduced.

Accordingly, as anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), for the foregoing reasons, it is clear that Brunolli does not anticipate either claim 1 or claim 8, or any claim dependent thereon.

III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 8 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

IV. Request For Notice Of Allowance

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP


Michael E. Fogarty
Registration No. 36,139

600 13th Street, N.W.
Washington, DC 20005-3096
(202) 756-8000 MEF:rp:dmd
Facsimile: (202) 756-8087
Date: July 18, 2005
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